III.   AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

<u>Listing of Claims:</u>

1.   (Original):   A method of automated sample processing comprising the steps of: establishing an automated sample processing system having an automated process operation capability to which robotic sample process functions are responsive;

providing an input parameter capability independent of said automated process operation capability;

accomplishing sample process parameter input to said input parameter capability without interrupting said automated process operation capability;

independently storing at least a portion of said parameter input for later access;

establishing stored parameter process data;

automatically accessing at least a portion of said stored parameter process data through operation of said automated process operation capability;

automatically replicating at least a portion of said stored parameter process data for use by said automated process operation capability;

integrating said automated process operation capability and said replicated portion of said stored parameter process data to create an interspersial robotic control functionality;

controlling at least some of said robotic sample process functions in response to said interspersial robotic control functionality; and

automatically processing at least one sample through operation of said robotic sample process functions at a process time independent of the time said step of accomplishing slide process parameter input to said input parameter capability without interrupting said automated process operation capability is accomplished.

2. (Original): A method of automated sample processing as described in claim 1 wherein said step of establishing an automated sample processing system having an automated process operation capability to which robotic sample process functions are responsive comprises the step of establishing an automated slide processing system.

3. (Original): A method of automated sample processing as described in claim 2 wherein said step of automatically processing at least one sample comprises the steps of:

arranging a plurality of slides on a carrier retainment assembly;

applying a reagent to said plurality of slides; and

automatically staining said plurality of slides.

4. (Original): A method of automated sample processing as described in claim 3 wherein said step of establishing an automated sample processing system having an automated process operation capability to which robotic sample process functions are responsive comprises the steps of:

establishing a plurality of automated slide stainers; and

electronically connecting said plurality of automated slide stainers.

5. (Currently amended): A method of automated sample processing as described in claim 1, 3, or 4 wherein said step of establishing an automated sample processing system comprises the step of establishing a stand alone automated slide processing system, and wherein said step of providing an input parameter capability independent of said automated process operation capability comprises the steps of:

utilizing a separate full function computer programmed to accomplish said input; and

electronically connecting said separate full function computer to said stand alone automated slide processing system.

6.　(Currently amended): A method of automated sample processing as described in claim 1, 3, or 4 and further comprising the step of establishing a local area network electronically connected to said automated sample processing system.

7.　(Original):　A method of automated sample processing as described in claim 6 wherein said step of establishing a local area network electronically connected to said automated sample processing system comprises the step of incorporating a system having a feature selected from a group consisting of:

an Ethernet element, a token ring element, an arcnet element, a fiber distributed data interface element, an industry specification protocol, a bluetooth-based element, a shared common link element, a transmission control protocol/internet protocol communication element, a packetized information protocol, a shared protocol, a proprietary protocol, and a layered protocol exchange system.

8.　(Currently amended): A method of automated sample processing as described in claim 3 [[or 4]] and further comprising the step of holding said plurality of slides on at least one movable carrier retainment assembly.

9.　(Original):　A method of automated sample processing as described in claim 8 and further comprising the step of automatically identifying said plurality of slides.

10.　(Currently amended): A method of automated sample processing as described in claim 1 [[or 4]] wherein said step of providing an input parameter capability independent of said automated process operation capability comprises the step of providing an autonomous input functionality.

11.　(Currently amended): A method of automated sample processing as described in claim 1 [[or 4]] wherein said step of providing an input parameter capability independent of said automated process operation capability comprises the step of utilizing a multitasked central processing unit resource.

12.   (Currently amended): A method of automated sample processing as described in claim 1 [[or 4]] wherein said step of providing an input parameter capability independent of said automated process operation capability comprises the step of utilizing a plurality of central processing units without implementing a multitasked central processing unit resource.

13.   (Currently amended): A method of automated sample processing as described in claim 1 [[or 4]] and further comprising the step of providing full operational functionality of said automated process operation capability while accomplishing said sample process parameter input.

14.   (Original): A method of automated sample processing as described in claim 1 wherein said step of providing an input parameter capability independent of said automated process operation capability comprises the step of utilizing a remote link to said automated sample processing system.

15.   (Original): A method of automated sample processing as described in claim 10 wherein said step of establishing an automated sample processing system having an automated process operation capability to which robotic sample process functions are responsive comprises the steps of:
establishing a plurality of automated slide stainers; and
electronically connecting said plurality of automated slide stainers.

16.   (Original): A method of automated sample processing as described in claim 10 wherein said step of establishing an automated sample processing system comprises the step of establishing a stand alone automated slide processing system, and wherein said step of providing an input parameter capability independent of said automated process operation capability comprises the steps of:
utilizing a separate full function computer programmed to accomplish said input;

and

electronically connecting said separate full function computer to said stand alone automated slide processing system.

17.   (Original):   A method of automated sample processing as described in claim 10 and further comprising the step of establishing a local area network electronically connected to said automated sample processing system.

18.   (Original):   A method of automated sample processing as described in claim 17 wherein said step of establishing a local area network electronically connected to said automated sample processing system comprises the step of incorporating a system having a feature selected from a group consisting of:
an Ethernet element, a token ring element, an arcnet element, a fiber distributed data interface element, an industry specification protocol, a bluetooth-based element, a shared common link element, a transmission control protocol/internet protocol communication element, a packetized information protocol, a shared protocol, a proprietary protocol, and a layered protocol exchange system.

19.   (Original):   A method of automated sample processing as described in claim 14 wherein said step of utilizing a remote link to said automated sample processing system comprises the step of utilizing a remote link having a feature selected from a group consisting of:
an internet connection element, a telephone line connection element, a wireless communication element, and a detachable memory element.

20.   (Original):   A method of automated sample processing as described in claim 1 wherein said step of providing an input parameter capability independent of said automated process operation capability comprises the step of utilizing a simplified entry parameter input functionality.

21.   (Original):   A method of automated sample processing as described in claim 1 wherein said step of providing an input parameter capability independent of said automated process operation capability comprises the step of utilizing a batch processing parameter input functionality.

22.   (Original):   A method of automated sample processing as described in claim 1 wherein at least a portion of said step of automatically processing occurs at least in part concurrently with at least a portion of said step of accomplishing slide process parameter input.

23.   (Original):   A method of automated sample processing as described in claim 1 wherein the initiation of said step of automatically processing for certain samples occurs significantly after completion of said step of accomplishing slide process parameter input for said certain samples.

24.   (Original):   A method of automated sample processing as described in claim 23 wherein said step of automatically processing for certain samples is initiated at a time after the completion of said step of accomplishing slide process parameter input for said certain samples, said time selected from a group consisting of:
at least about one hour, at least about three hours, at least about eight hours, at least about one day, at least about two days, and at least about one week.

25.   (Currently amended): A method of automated sample processing as described in claim 1 [[or 4]] wherein said step of accomplishing sample process parameter input to said input parameter capability without interrupting said automated process operation capability comprises the step of utilizing an autonomous input functionality.

26.   (Currently amended): A method of automated sample processing as described in claim 1 [[or 4]] wherein said step of accomplishing sample process parameter input to said input parameter capability without interrupting said automated

process operation capability comprises the step of utilizing a multitasked central processing unit resource.

27. (Currently amended): A method of automated sample processing as described in claim 1 [[or 4]] wherein said step of accomplishing sample process parameter input to said input parameter capability without interrupting said automated process operation capability comprises the step of utilizing a plurality of central processing units without implementing a multitasked central processing unit resource.

28. (Original): A method of automated sample processing as described in claim 1 wherein said step of accomplishing sample process parameter input to said input parameter capability without interrupting said automated process operation capability comprises the step of inputting at least some slide identification information.

29. (Original): A method of automated sample processing as described in claim 28 wherein said step of inputting at least some slide identification information comprises the step of inputting information selected from a group consisting of: user operation information, patient identification information, HIPPA-compliant identification information, coded identification information, and internal identification information.

30. (Original): A method of automated sample processing as described in claim 1 wherein said step of accomplishing sample process parameter input to said input parameter capability without interrupting said automated process operation capability comprises the step of inputting at least some process scheduling information.

31. (Original): A method of automated sample processing as described in claim 1 wherein said step of accomplishing sample process parameter input to said input

parameter capability without interrupting said automated process operation capability comprises the step of inputting at least some process sequence information.

32. (Original): A method of automated sample processing as described in claim 31 wherein said step of inputting at least some process sequence information comprises the step of inputting at least some schedule priority information.

33. (Original): A method of automated sample processing as described in claim 31 wherein said step of inputting at least some process sequence information comprises the step of inputting at least some stat process request information.

34. (Original): A method of automated sample processing as described in claim 1 wherein said step of accomplishing sample process parameter input to said input parameter capability without interrupting said automated process operation capability comprises the step of inputting at least some process protocol information.

35. (Original): A method of automated sample processing as described in claim 1 and further comprising the step of providing for administrator control over at least some aspects of said automated sample processing system.

36. (Original): A method of automated sample processing as described in claim 35 wherein said step of providing for administrator control over at least some aspects of said automated sample processing system comprises the step of permitting administrator limitations on the functional availability of at least some functionality of said automated sample processing system.

37. (Original): A method of automated sample processing as described in claim 36 wherein said step of permitting administrator limitations on the functional availability of at least some functions of said automated sample processing system

comprises the step of permitting administrator limitations on automated sample processing system functionality selected from a group consisting of:

specific stainer availability functionality, certain reagent availability functionality, certain protocol availability functionality, patient identification information access functionality, process priority request functionality, and stat process request functionality.

38.   (Original):   A method of automated sample processing as described in claim 1 wherein said step of accomplishing sample process parameter input to said input parameter capability without interrupting said automated process operation capability comprises the step of inputting at least some user privileges information.

39.   (Original):   A method of automated sample processing as described in claim 1 wherein said step of accomplishing sample process parameter input to said input parameter capability without interrupting said automated process operation capability comprises the step of inputting at least some individual slide process information.

40.   (Original):   A method of automated sample processing as described in claim 1 wherein said step of accomplishing sample process parameter input to said input parameter capability without interrupting said automated process operation capability comprises the step of inputting at least some group slide process information.

41.   (Original):   A method of automated sample processing as described in claim 1 wherein said step of accomplishing sample process parameter input to said input parameter capability without interrupting said automated process operation capability comprises the step of inputting at least some preferred stainer information.

42. (Original): A method of automated sample processing as described in claim 1 wherein said step of independently storing at least a portion of said parameter input for later access comprises the step of storing at least a portion of said parameter input on a physically independent memory.

43. (Original): A method of automated sample processing as described in claim 1 wherein said step of storing at least a portion of said parameter input on a physically independent memory comprises the step of storing at least a portion of said parameter input at a location remote from said automated sample processing system.

44. (Original): A method of automated sample processing as described in claim 42 wherein said step of storing at least a portion of said parameter input on a physically independent memory comprises the steps of:
utilizing a separate full function computer programmed to accept and store at least a portion of said parameter input; and
electronically connecting said separate full function computer to a stand alone automated slide processing system.

45. (Original): A method of automated sample processing as described in claim 44 wherein said step of automatically accessing at least a portion of said stored parameter process data through operation of said automated process operation capability comprises the step of specifying an electronic memory address for at least a portion of said stored parameter process data.

46. (Original): A method of automated sample processing as described in claim 45 wherein said step of automatically accessing at least a portion of said stored parameter process data through operation of said automated process operation capability further comprises the step of transmitting said electronic memory address over a local area network electronically connected to said automated sample processing system.

47.   (Original):   A method of automated sample processing as described in claim 1 wherein said step of automatically accessing at least a portion of said stored parameter process data through operation of said automated process operation capability comprises the step of utilizing a remote link to said automated sample processing system.

48.   (Original):   A method of automated sample processing as described in claim 47 wherein said step of utilizing a remote link to said automated sample processing system comprises the step of utilizing a remote link having a feature selected from a group consisting of:

an internet connection element, a telephone line connection element, a wireless communication element, and a detachable memory element.

49.   (Original):   A method of automated sample processing as described in claim 1 wherein said step of automatically accessing at least a portion of said stored parameter process data through operation of said automated process operation capability comprises the steps of:

determining operational readiness of at least a portion of said automated sample processing system functionality; and

prompting initiation of access of at least a portion of said stored parameter process data in response to said step of determining operational readiness of at least a portion of said automated sample processing system functionality.

50.   (Original):   A method of automated sample processing as described in claim 49 wherein said step of determining operational readiness of at least a portion of said automated sample processing system functionality comprises the step of electronically determining operational availability of an automated sample processing system aspect selected from a group consisting of:

an individual sample element, a defined group of samples, a physically grouped collection of samples, a slide drawer component, an stand alone automated slide

processing system, a slide stainer system element, and a user initiated prompt signal.

51. (Original): A method of automated sample processing as described in claim 1 wherein said step of automatically replicating at least a portion of said stored parameter process data for use by said automated process operation capability comprises the step of automatically replicating on a memory aspect selected from a group consisting of:

a volatile memory functionality, a random access memory functionality, a non-volatile memory functionality, an electrically erasable programmable read only memory functionality, a main storage functionality, a   secondary   storage functionality, a cache memory functionality, and a detachable memory element.

52. (Original): A method of automated sample processing as described in claim 1 wherein said step of integrating said automated process operation capability and said replicated portion of said stored parameter process data to create an interspersial robotic control functionality comprises the step of accomplishing enhanced temporal scheduling of a plurality of sample process steps.

53. (Original): A method of automated sample processing as described in claim 52 wherein said step of integrating said automated process operation capability and said replicated portion of said stored parameter process data to create an interspersial robotic control functionality comprises the step of interleaving a plurality of process operations.

54. (Original): A method of automated sample processing as described in claim 1 wherein said step of integrating said automated process operation capability and said replicated portion of said stored parameter process data to create an interspersial robotic control functionality comprises the step of interleaving a plurality of individual sample operations.

55.   (Currently amended): A method of automated sample processing as described in claim 1 ~~or 54~~ wherein said step of integrating said automated process operation capability and said replicated portion of said stored parameter process data to create an interspersial robotic control functionality comprises the step of sequencing a plurality of individual sample operations.

56.   (Original):   An automated sample processing system comprising:

at least one sample arranged on a carrier element;

a process operation control system configured to at least partially process said sample;

robotic motion system responsive to said process operation control system;

an independent process parameter input configured independent from said process operation control system;

an independent process parameter memory responsive to said process parameter input configured to store at least some parameter process data;

an automatic memory access element;

an automatic data replication memory responsive to said automatic memory access element and at least a portion of said parameter process data; and

an interspersial robotic control element responsive to said automatic data replication memory and to which said robotic motion system is responsive.

57-104.   (Canceled)